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EXAMINER
VAN DOREN, BETH

ART UNIT	PAPER NUMBER
3623	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/02/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

	Application No.	Applicant(s)
Office Action Summary	09/824,852	JACOBS ET AL.
	Examiner	Art Unit
	Beth Van Doren	3623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>14 November 2006</u>.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27,31-36,38-60 and 62-81* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27,31-36,38-60 and 62-81* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>20070118</u>.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   The following is a Final office action in response to communications received 11/14/06.

Claims 28 and 30 have been canceled. Claims 1, 11, 21, 34, and 58 have been amended. Claims

1-27, 31-36, 38-60, and 62-81 are now pending in this application.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

3.   Claims 1-27, 31-36, 38-60, and 62-81 are rejected under 35 U.S.C. 103(a) as being

unpatentable over MDSI Mobile Data Solutions (www.mdsi-advantex.com) in view of Sisley et

al. (U.S. 5,467,268) and in further view of Lesaint et al. (U.S. 6,578,005).

        As per claim 1, MDSI Mobile Data Solutions teaches a computer-implemented method

for scheduling an order to a mobile service representative, the method comprising:

        negotiating a reservation to perform an order for a customer against a schedule (See page

3, section 1, and page 4, sections 2-3, wherein the reservation is negotiated);

        adding a reservation, wherein adding a reservation includes identifying a duration, a

priority, a location, an appointment window, a mobile service representative, a bumping

indicator (See page 3, page 4, sections 2-3, and page 5, sections 2-3, which disclose these

criteria);

analyzing shifts of mobile service representatives to identify shifts that are suitable for

reservation (See page 3, page 4, sections 2-3, and page 5, sections 2-3, wherein the availability of

a mobile service representative to take a call is determined);

booking the order to one of the shifts of mobile service representatives according to

objective criteria (See page 3, sections 1-2, and page 4, wherein the service order is booked to a

schedule of a mobile worker, based on at least the criteria of location);

optimizing periodically the shift of the mobile service representative (See page 3, section

1, and page 4, sections 2-3, wherein the shifts are rebalanced periodically).

However, MDSI Mobile Data Solutions does not expressly disclose sorting the identified

shifts according to objective criteria or booking a shift starting with the best shift and in

descending order to the worst shift. Further, MDSI Mobile Data Solutions does not expressly

disclose an aggregation indicator, where aggregating reservations of the shift have enabled

aggregation indicators and are in accordance with an aggregation parameter set defining

information of reservations to be compared during aggregation.

Sisley et al. discloses sorting the identified shifts according to objective criteria or

booking a shift starting with the best shift and in descending order to the worst shift (See column

5, line 50-column 6, line 15, column 7, lines 9-20, column 8, lines 1-15, column 9, lines 20-30,

and column 10, lines 15-30, which discusses sorting the shifts based on skills, availability, etc.

and then listing them in a "best-first" queue). However, Sisley et al. does not expressly disclose

aggregating reservations of the shift having enabled aggregation indicators and in accordance

with an aggregation parameter set defining information of reservations to be compared during

aggregation.

Lesaint et al. teaches aggregation indicators and aggregating reservations of the shift having enabled aggregation indicators and in accordance with an aggregation parameter set defining information of reservations to be compared during aggregation (See column 12, lines 30-50, column 14, lines 15-25, wherein the order is made up of multiple aggregated orders that include information about specific ordering or requirements).

Both Sisley et al. and MDSI Mobile Data Solutions disclose systems that assign mobile field technicians to work calls using automated means. Further, both disclose assigning the best technicians based on the appointment window, a duration, a priority, a location, and a set of skills of the technician and service call. It would have been obvious to one of ordinary skill in the art at the time of the invention to sort the identified shifts according to objective criteria and book shifts starting with the best shift first according to the objective criteria in order to increase customer satisfaction improving the timeliness and predictability of resource delivery and increase dispatcher productivity through automated assignment and scheduling. See column 3, lines 50-55, of Sisley et al.

Further, all of MDSI Mobile Data Solutions, Sisley et al., and Lesaint et al. disclose systems that optimize the scheduling of tasks to workers in a field technician service industry, taking into account task/order requirements and worker constraints. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include scheduling aggregate orders in order to more efficiently meet the needs of the person placing the order. See column 3, lines 50-65.

As per claim 2, MDSI Mobile Data Solutions teaches configuring a constraint set, wherein the act of configuring allows a user to modify the constraint set so as to control the way

in which orders are assigned to a mobile service representative (See page 4, sections 2-3,

wherein the system has a set including priority, skills, etc. that is used to assign service orders).

As per claim 3, MDSI Mobile Data Solutions wherein negotiating includes using a

window over the schedule, wherein the window defines a set of shifts in the schedule that can be

booked by the act of booking (See page 4, sections 2-3, and page 5, sections 2-3, wherein a

window is used to view the availability of the mobile workers).

As per claim 4, MDSI Mobile Data Solutions discloses wherein negotiating includes

negotiating an appointment window for the order so as to allow the mobile service representative

to begin the performance of the order within the time frame of the appointment window (See

page 4, sections 2-3, and page 5, sections 2-5, which discusses performance of the service order).

As per claim 5, MDSI Mobile Data Solutions discloses bumping an order, which has a

lower priority, for another order, which has a higher priority (See page 3, section 2, page 4,

sections 1-3, wherein the service orders are rebalanced based on priority and emergencies).

As per claim 6, MDSI Mobile Data Solutions discloses a priority of an order (See page 3,

section 2, and page 4, which discuss priorities of tasks). However, MDSI Mobile Data Solutions

does not expressly disclose and Lesaint et al. discloses escalating the priority of an order over

time when the order has not been performed by the mobile service representative (See column 6,

lines 6-17, column 21, lines 5-30, wherein queue time is considered, where a call has a priority

as well as a queue time beyond which the call is considered tardy).

Both Sisley et al. and MDSI Mobile Data Solutions disclose systems that assign mobile

field technicians to work calls using automated means. Sisley et al. specifically discloses the

amount of time allowed between the receipt of a service call and the assignment of the call to a

technician. It would have been obvious to one of ordinary skill in the art at the time of the

invention to escalate the priority of an order when it has not been performed in order to increase

customer satisfaction improving the timeliness and predictability of resource delivery and

increase dispatcher productivity through automated assignment and scheduling. See column 3,

lines 50-55.

As per claim 7, MDSI Mobile Data Solutions teaches scheduling an order with a mobile

service representative (See page 3, sections 1-2, page 4, wherein the service order is booked to a

schedule). However, MDSI Mobile Data Solutions does not expressly disclose splitting an order

to a set of orders when the performance of the order requires a number of days to perform the

order.

Sisley et al. discloses an order having an estimated call duration (See column 6, lines 15-

30).

Both Sisley et al. and MDSI Mobile Data Solutions disclose systems that assign mobile

field technicians to work calls using automated means. It is old and well known in the service

industry that not all service requests are compliable in a single day and require multiple days of

work. Therefore, since MDSI Mobile Data Solutions and Sisley et al. disclose assigning field

service workers to requests of a customer based on the requirements of the customer and an

estimated call duration, it would have been obvious to one of ordinary skill in the art at the time

of the invention to allow for the assignment of an order over multiple days in order to order to

more efficiently meet the needs of the person placing the order. See column 3, lines 50-55 of

Sisley et al.

As per claim 8, MDSI Mobile Data Solutions teaches wherein optimizing includes optimizing a single shift of a mobile service representative so as to shorten travel time between orders booked in the single shift (See page 4, section 3, and page 5, sections 2-3, wherein mobile workers are assigned as close to their location as possible).

As per claim 9, MDSI Mobile Data Solutions discloses wherein optimizing includes optimizing at least one pair of shifts, wherein optimizing is selected from a group consisting of swapping orders between the at least one pair of shifts and reassigning orders between the at least one pair of shifts (See page 4, sections 2-3, and page 5, sections 2-3, wherein the dispatcher rebalances the schedule).

As per claim 10, MDSI Mobile Data Solutions teaches wherein booking includes booking the order to a shift of the mobile service representative if the mobile service representative has the set of skills and the set of equipment (See page 4, sections 2-3, which discusses criteria for booking a mobile worker).

Claims 11-20 recite equivalent limitations to claims 1-10, respectively, and are therefore rejected using the same art and rationale as applied above.

As per claim 21, MDSI Mobile Data Solutions discloses a computer-implemented scheduling system for a dispatching environment having a scheduling engine for scheduling mobile service representative, the scheduling engine comprising:

a negotiator operable to negotiate an appointment window to perform an order, the order defined by a data structure that includes at least one of an appointment window, a duration, a priority, a location, and a set of skills required to carry out the order, and further includes at least one of a bumping indicator, and an aggregation indicator (See page 3, page 4, sections 2-3, and

page 5, sections 2-3, which discloses at least a location and an aggregation indicator. See page 3,

section 1, and page 4, sections 2-3, wherein the reservation is negotiated);

an assignment filter configured to analyze shifts of mobile service representatives to

identify shifts that are suitable for the reservation (See page 3, page 4, sections 2-3, and page 5,

sections 2-3, wherein the availability of a mobile service representative to take a call is

determined);

an assigner operable to assign the order to a shift of a mobile service representative (See

page 3, sections 1-2, page 4, wherein the service order is booked to a schedule of a mobile

worker); and

an optimizer operable to optimize dynamically at least one shift so as to enhance the

scheduling system in accordance with a predetermined set of business objectives (See page 3,

section 1, and page 4, sections 2-3, wherein the shifts are rebalanced periodically).

However, MDSI Mobile Data Solutions does not expressly disclose sorting the identified

shifts according to objective criteria or booking a shift starting with the best shift and in

descending order to the worst shift according to the objective criteria. Further, MDSI Mobile

Data Solutions does not expressly teach an aggregator component is operable to aggregate

reservations of the shift having enabled aggregation indicators and in accordance with an

aggregation parameter set defining information of reservations to be compared during

aggregation.

Sisley et al. discloses sorting the identified shifts according to objective criteria or

booking a shift starting with the best shift and in descending order to the worst shift (See column

5, line 50-column 6, line 15, column 7, lines 9-20, column 8, lines 1-15, column 9, lines 20-30,

and column 10, lines 15-30, which discusses sorting the shifts based on skills, availability, etc. and then listing them in a "best-first" queue). However, Sisley et al. does not expressly disclose aggregating reservations of the shift having enabled aggregation indicators and in accordance with an aggregation parameter set defining information of reservations to be compared during aggregation.

Lesaint et al. teaches an aggregator component in the scheduling apparatus to aggregate reservations of the shift having enabled aggregation indicators and in accordance with an aggregation parameter set defining information of reservations to be compared during aggregation (See column 12, lines 30-50, column 14, lines 15-25, wherein the order is made up of multiple aggregated orders that include information about specific ordering or requirements).

Both Sisley et al. and MDSI Mobile Data Solutions disclose systems that assign mobile field technicians to work calls using automated means. Further, both disclose assigning the best technicians based on the appointment window, a duration, a priority, a location, and a set of skills of the technician and service call. It would have been obvious to one of ordinary skill in the art at the time of the invention to sort the identified shifts according to objective criteria and book shifts starting with the best shift first according to the objective criteria in order to increase customer satisfaction by improving the timeliness and predictability of resource delivery and increase dispatcher productivity through automated assignment and scheduling. See column 3, lines 50-55.

Further, all of MDSI Mobile Data Solutions, Sisley et al., and Lesaint et al. disclose systems that optimize the scheduling of tasks to workers in a field technician service industry, taking into account task/order requirements and worker constraints. Therefore, it would have

been obvious to one of ordinary skill in the art at the time of the invention to include scheduling

aggregate orders in order to more efficiently meet the needs of the person placing the order. See

column 3, lines 50-65.

As per claim 22, MDSI Mobile Data Solutions teaches wherein the order is defined by a

data structure that includes an appointment window, a duration, a priority, a location, and a set of

skills required to carry out the order, and wherein the data structure resides on a computer media

(See page 1, section 1, page 3, page 4, sections 2-3, and page 5, section 2, which disclose

duration, priority, location, etc.).

As per claim 23, MDSI Mobile Data Solutions teaches wherein the mobile service

representative is defined by a data structure that includes a set of skills that the mobile service

representative possesses and the equipment that the mobile service representative possesses, and

wherein the data structure resides on a computer media (See page 4, sections 2-3, which

discusses criteria for booking a mobile worker).

As per claim 24, MDSI Mobile Data Solutions teaches assigning orders to mobile service

representatives' shifts using constraints of the order and constraints of the mobile representative

(See page 4, sections 2-3). However MDSI Mobile Data Solutions does not expressly disclose a

shift being defined by a data structure that includes a shift start date and start time, a shift end

date and end time, a set of break start dates and start time, a set of break end dates and end times,

and a starting location and an ending location, and wherein the data structure resides on a

computer media.

Sisley et al. discloses a shift being defined by a data structure that includes a shift start

date and start time, a shift end date and end time, a set of break start dates, a set of break end

dates, and a starting location and an ending location, and wherein the data structure resides on a

computer media (See column 5, line 45-column 6, line 25 and 30-50, column 7, lines 25-42).

However, Sisley et al. does not expressly disclose the start and end times for the breaks.

Lesaint et al. discloses start and end times associated with breaks (See column 11, lines

55-65).

Sisley et al., Lesaint et al., and MDSI Mobile Data Solutions all disclose systems that

assign mobile field technicians to work calls using automated means, as discussed above.

Further, Sisley et al. and MDSI Mobile Data Solutions disclose assigning the best technicians

based on the appointment window, a duration, a priority, a location, and a set of skills of the

technician and service call. Sisley discloses start and end days for employee vacations,

appointments, etc. when the technician will not be working. Appointments and vacations having

both dates and times associated with them is old and well known in appointment systems.

Lesaint et al. specifically discloses start and end times associated with breaks, such as lunch

breaks. Therefore, it would have been obvious to one of ordinary skill in the art at the time of

the invention to include specific times associated with the shift events of breaks in order to

increase customer satisfaction by improving the timeliness and predictability of resource delivery

and increase dispatcher productivity through automated assignment and scheduling, which

includes shift times. See column 3, lines 50-55. See also column 6, lines 15-25, which discusses

times being placed on the assignment calendar.

As per claim 25, MDSI Mobile Data Solutions teaches wherein the assigner accounts for

the travel time of the mobile service representative of the mobile service representative in

assigning the order to the shift of the mobile service representative (See page 4, sections 2-3, and

page 5, sections 2-3, wherein the system has a set including travel time). However, MDSI

Mobile Data Solutions does not expressly disclose and Sisley et al. discloses break time (See

column 5, line 65-column 6, line 5, which discusses assigning orders with a consideration of a

worker's breaks).

Both Sisley et al. and MDSI Mobile Data Solutions disclose systems that assign mobile

field technicians to work calls using automated means. Further, both disclose assigning the best

technicians based on the appointment window, a duration, a priority, a location, and a set of

skills of the technician and service call. Sisley specifically discloses start and end days for

employee vacations, appointments, etc. when the technician will not be working. Therefore, it

would have been obvious to one of ordinary skill in the art at the time of the invention to include

specific times associated with the shift events of breaks in order to increase customer satisfaction

by improving the timeliness and predictability of resource delivery and increase dispatcher

productivity through automated assignment and scheduling, which includes shift times. See

column 3, lines 50-55.

As per claim 26, MDSI Mobile Data Solutions teaches wherein the appointment window

includes an identifier, a start time, and an end time, and wherein the appointment window is

visible to the negotiator (See page 3, section 1, page 4, sections 2-3, and page 5, sections 2-3,

which discuss an appointment window visible to the negotiator).

As per claim 27, MDSI Mobile Data Solutions teaches wherein the order includes a

predetermined level of priority, wherein the predetermined level of priority of the order

determines whether the order will be bumped by another order having a higher level of priority

(See page 3, section2, page 4, sections 1 and 3, discussing priority of an order in scheduling).

As per claim 31, MDSI Mobile Data Solutions teaches a travel time component that considers travel time when assigning shifts to mobile representatives (see page 4, section 2-3, and page 5, sections 2-3, wherein the location of the worker is considered when the task is assigned). However, MDSI Mobile Data Solutions does not expressly disclose and Sisley et al. discloses calculating the travel time between the start of a shift to the first order assigned to the shift and the travel time between two orders, and the travel time between the last order assigned to the shift and the end of the shift (See column 6, lines 18-26, and column 18, lines 43-55, which discloses travel time considerations).

Both Sisley et al. and MDSI Mobile Data Solutions disclose systems that assign mobile field technicians to work calls using automated means. Sisley specifically discloses travel time between shift assignments. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to take into consideration travel time when assignment technicians to service calls in order to increase customer satisfaction by improving the timeliness and predictability of resource delivery and increase dispatcher productivity through automated assignment and scheduling, which includes shift times. See column 3, lines 50-55.

As per claim 32, MDSI Mobile Data Solutions teaches wherein the optimizer includes an optimizing filter, wherein the optimizing filter finds a shift into which a reservation fits, with the purpose of better satisfying the optimization objectives (See page 3, sections 1-2, and page 4, wherein the shifts are optimized automatically).

As per claim 33, MDSI Mobile Data Solutions teaches wherein the optimizer includes an optimization objective component having a set of optimization objectives, wherein the optimization objective component determines the degree to which the set of optimization

objectives are satisfied if the optimizer were to optimize a shift or a pair of shifts (See page 3, sections 1-2, and page 4, wherein the shifts are optimized automatically).

Claim 34 recites substantially similar elements to claim 1 and is therefore rejected using the same art and rationale as set forth above.

As per claim 35, MDSI Mobile Data Solutions discloses adding a mobile service representative, wherein adding the mobile service representative includes identifying a working area of the mobile service representative, a set of skills of the mobile service representative, and a set of equipment types that is possessed by the mobile service representative (See page 4, sections 2-3, which considers attributes of the mobile worker in the assignment).

As per claim 36, MDSI Mobile Data Solutions teaches adding orders to mobile service representatives' shifts using constraints of the order and constraints of the mobile representative (See page 4, sections 2-3). However MDSI Mobile Data Solutions does not expressly disclose and Sisley et al. discloses adding a shift, wherein adding a shift includes identifying a mobile service representative to be associated with the shift, a start time, an end time (See column 6, lines 1-25, column 7, lines 5-22 and line 60-column 8, line 10, wherein a new call is added with a start time, end time, etc.). Sisley et al. also discloses a set of breaks (See column 6, lines 1-5, which discloses breaks, such as appointments, in the schedule of the technician).

Both Sisley et al. and MDSI Mobile Data Solutions disclose systems that assign mobile field technicians to work calls using automated means. Further, both disclose assigning the best technicians based on the appointment window, a duration, a priority, a location, and a set of skills of the technician and service call. Sisley specifically discloses start and end days for employee vacations, appointments, etc. when the technician will not be working. Therefore, it

would have been obvious to one of ordinary skill in the art at the time of the invention to allow a

new shift to be added, along with times and breaks associated with the technician and the shift, in

order to increase customer satisfaction by improving the timeliness and predictability of resource

delivery and increase dispatcher productivity through automated assignment and scheduling,

which includes shift times. See column 3, lines 50-55, of Sisley et al.

As per claim 38, MDSI Mobile Data Solutions teaches finding a list of appointment

windows for the act of negotiating (See page 3, sections 1-2, page 4, and page 5, section 3, which

discusses appointment windows).

As per claim 39, MDSI Mobile Data Solutions discloses assigning forcibly a reservation

when the act of assigning the reservation has failed (See page 4, section 3, which discusses the

dispatcher overriding or manually entering a reservation).

As per claim 40, MDSI Mobile Data Solutions teaches removing an assignment of a

reservation (See page 5, section 4, wherein an assignment is removed).

As per claim 41, MDSI Mobile Data Solutions teaches canceling a reservation (See page

5, section 4, wherein the reservation is canceled when no one is available).

As per claim 42, MDSI Mobile Data Solutions teaches completing a reservation so as to

inhibit the reservation from being bumped, aggregated, or moved to another shift (See page 3,

section 2, page 4, sections 1 and 3, wherein an emergency reservation cannot be bumped).

As per claims 43 and 44, MDSI Mobile Data Solutions teaches reassigning forcibly a

reservation (See page 4, section 3, wherein the dispatcher rebalances the assignments manually).

As per claim 45, MDSI Mobile Data Solutions teaches assigning a bumped or a yanked reservation (See page 4, section 3, wherein a bumped reservation is reassigned when rebalancing occurs).

As per claim 46, MDSI Mobile Data Solutions teaches setting at least one property from a set of properties of a reservation (See page 4, which sets information about the appointment).

As per claim 47, MDSI Mobile Data Solutions teaches modifying a mobile service representative (See page 4, section 3, wherein the representative's assignments are changed).

As per claim 48, MDSI Mobile Data Solutions teaches deleting a mobile service representative (See page 4, sections 2-3, wherein when an order is reassigned, the worker is deleted from the task).

As per claims 49 and 50, MDSI Mobile Data Solutions teaches modifying forcibly a shift (See page 4, section 3, wherein the representative's assignments are changed).

As per claims 51 and 52, MDSI Mobile Data Solutions teaches rebalancing a schedule and removing a shift from the schedule of one worker and placing the shift on another schedule (See page 4). However, MDSI Mobile Data Solutions does not expressly disclose and Sisley et al. discloses deleting forcibly a shift (See column 7, line 60-column 8, line 15, column 19, lines 15-35).

Both Sisley et al. and MDSI Mobile Data Solutions disclose systems that assign mobile field technicians to work calls using automated means. Sisley specifically discloses removing shifts and reassigning the shifts. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include deleting a shift of the user in order to increase

customer satisfaction by allowing the system to compensate for all possible changes. See pages

1 and 3 of MDSI Mobile Data Solutions.

As per claim 53, MDSI Mobile Data Solutions teaches notifying a subscriber when a

reservation event occurs (See page 5, section 4, wherein the customer is notified via call ahead).

As per claim 54, MDSI Mobile Data Solutions teaches getting reservation assignment

information (See page 4, section 2-3, wherein the system receives the assignment information).

As per claims 55 and 56, MDSI Mobile Data Solutions teaches getting mobile service

representative assignment information (See page 1, section 1, page 3, page 4, section 1, page 5,

section 1, page 6, wherein the assignment is communicated to the mobile worker).

As per claim 57, MDSI Mobile Data Solutions teaches confirming a reservation (See

page 5, section 4, wherein the reservation is confirmed).

Claims 58-60 and 62-81 recite equivalent limitations to claims 34-36 and 38-57,

respectively, and are therefore rejected using the same art and rationale as applied above.

Response to Arguments

4.   Applicant's arguments with regards to MDSI Mobile Data Solutions (www.mdsi-

advantex.com) in view of Sisley et al. (U.S. 5,467,268) and in further view of Lesaint et al. (U.S.

6,578,005) have been fully considered, but they are not persuasive. In the remarks, Applicant

argues that (1) MDSI Mobile Data Solutions does not teach or suggest analyzing shifts of mobile

service representatives to identify shifts that are suitable for the reservations and sorting the

identified shifts according to objective criteria, (2) MDSI Mobile Data Solutions does not teach

or suggest the manner in which the field personnel to whom the order is automatically assigned

is determined, and (3) Lesaint et al. does not teach or suggest aggregating reservations into a

shift or based on reservation information, but rather assigning multiple technicians to the same task.

In response to argument (1), Examiner respectfully disagrees. Examiner first points out that she did rely on MDSI Mobile Data Solutions to teach analyzing shifts of mobile service representatives to identify shifts that are suitable for reservation. However, it was Sisley et al. that was relied on to disclose sorting the identified shifts according to objective criteria. MDSI Mobile Data Solutions teaches that the system considers the availability of a mobile service representative to take a call based on his/her schedule in page 3, page 4, sections 2-3, and page 5, sections 2-3. Thus, shifts that are available are suitable to makes reservations in. MDSI Mobile Data Solutions further teaches considering the location of the worker when booking the technician. See page 3, sections 1-2, and page 4. Sisley et al. was relied upon to disclose sorting the identified shifts according to objective criteria and booking a shift starting with the best shift and in descending order to the worst shift. Sisley et al. specifically discloses sorting the shifts based on skills, availability, etc. and then listing them in a "best-first" queue, as set forth above. Thus, these elements are taught by MDSI Mobile Data Solutions in view of Sisley et al. and in further view of Lesaint et al. (which are analogous art and have motivation to combine, as set forth above).

In response to argument (2), Examiner respectfully points out that none of claims 1, 11, 21, 34, and 58 specifically recite the term automatic or that the order is automatically assigned to the field personnel. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Examiner points out that MDSI Mobile Data Solutions does

disclose, however, on page 4, section 1, that the system can work in automatic mode or

recommend mode, and thus can perform automatic assignment based on the known parameters.

In response to argument (3), Examiner respectfully disagrees. Examiner first points out

that the limitations directed towards aggregating reservations of the shift have enabled

aggregation indicators and in accordance with an aggregation parameter set defining information

of reservations to be compared during aggregation in the independent claims was added in the

current amendment. Previously presented claim 28 (now canceled) recited "wherein the order

includes several orders that have been aggregated", which did not have the same scope as the

currently added limitations. Thus, new art rejections based on Lesaint et al. have been set forth

above, as necessitated by amendment. Examiner further notes that this amendment has changed

the scope of the term "aggregation indicator" previously presented in independent claims 1, 11,

21, 34, and 58.

Lesaint et al. discloses that information concerning the tasks to be scheduled is input into

the system. This information causes tasks that must be allocated to the same technician in a

predetermined order to be pulled and scheduled, as well as tasks required more than one person

at a single location. See column 12, lines 25-45. In cases where a task requires more than one

person, the task is treated as a group of linked tasks with aligned start times on the multiple

persons' schedules. Thus, these tasks are indicated to the system as linked/collective and the

tasks are scheduled to shifts by aligning start times. See column 14, lines 15-25. In the case of

tasks that must be allocated to the same technician in a predetermined order, the preprocessor

schedules this list of tasks with the technician. Thus, the system determines (based on

predetermined ordering parameters) the order in which the aggregated tasks (collective tasks)

should be scheduled. These tasks are indicated to the system as linked/collective.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Beth Van Doren whose telephone number is (571) 272-6737.

The examiner can normally be reached on M-F, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Tariq Hafiz can be reached on (571) 272-6729. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

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may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

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like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

bvd
January 30, 2007

Beth Van Dora
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Patent Examiner